FINAL REPORT

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PROVISION OF EXTENSION SERVICES TO AGROFORESTRY/WOODLOT MANAGERS

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FARM WOODLOT ASSOCIATION OF SASKATCHEWAN

Sustainable Woodlot Extension Program

Final Report

March 31, 2001
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Final Report – March 31, 2001
Sustainable Woodlot Extension Program

A. Executive Summary

The AFIF Sustainable Woodlot Extension Program provided specialized extension services to owners and managers of wooded lands in the agricultural sector of the province. The biodiversity represented on these woodlots is becoming critical to the ecological health of the areas that they are located in. Equally important is the contribution that woodlots can make to the economic health of the rural economy. More time and effort promoting more and better management of these areas is needed before these benefits can be fully realized. Providing extension services is the best way to accomplish this.

The main objective of the extension services program is to educate landowners and managers about the benefits of land use planning and to encourage them to begin a planning process. Planning educates the landowner about what resources he has to work with and begins or furthers their education about management. Planning encourages people to take responsibility for the results of their management activities and encourages them to think in the long-term.

There is increasing concern by the general public about environmental health issues. Promoting land use planning that takes into consideration the ecological health of the general area is an important way to mitigate further environmental degradation. It could also enable landowners to repair areas that have been degraded. Achieving the goal of landowner stewardship requires that educational services be in place to support landowners in making sound management decisions. Information needs to be presented in a practical format so that landowners may incorporate this knowledge into their management practices. The woodlot extension program has begun this educational process. More effort and investment is required.

B. Technical Report

I. Background and Objectives

Farm woodlots provide important environmental, economic, social and cultural benefits to their owners and the community as a whole. Basic knowledge about managing these ecosystems and the opportunities that their management presents is not widespread in the agricultural community. Extension services are vital for disseminating this knowledge.

The objective of the program is to supply extension services to owners and mangers of wooded lands in the agricultural sector of the province. The services provided take a sustainable approach to woodlot management by introducing clients to concepts of ecosystem based management and biodiversity conservation. This approach to land management is considered to be more sustainable than single use concepts such as forestry or livestock grazing.

II. Project Activities and Achievements

The program focuses on delivering extension services by providing a variety of services.

Woodlot Walk-Thru Service: This service provides a general assessment of the woodlot through on-site consultations with landowners and includes a written summary and appendix of applicable information. The service may include follow up consultation and the mailing of various information packages. Basic to moderately intense biotic inventories are recorded for all assessed landbases. To date 61 people have taken advantage of this service with another 3 applications on file with others having expressed interest.

Information Service: Inquiries for information are made by phone and mail. People are generally looking for information about the Association or specific information primarily about various forms of forest management, wildlife habitat enhancement, wood harvesting and processing, wood and specialty forest product markets and prices.
180 information packages have been delivered by mail and approximately 30 to 40 more were processed for visitors to the main office.
14 issues of the 16 to 20 page newsletters were produced and approximately 4,000 copies distributed. The newsletter has provided readers with information about the AFIF services provided through the program, activities taking place, project accomplishments, related issues, and technical articles about specific topics. The newsletter is an important educational tool with a broad distribution.

Management Planning Service: This service is intended for people who have set clear and feasible goals for the use of their resources. The plan presents mangers with detailed management prescriptions and a practical work schedule.

Six forest management plans, including operating plans, have been completed. Two plans were completed for Sask Ag & Food, 3 for Wildlife Habitat Lands and 1 for a private landowner. These plans were developed for landbases ranging from 80 to 1,300 acres.

Events: Events have included the hosting of seminars, workshops, a conference and participation in events organized by others including trade shows and exhibitions. Attendance at seminars varied tremendously. In many cases attendees at these events were more interested in wood markets versus practical management knowledge.

Tree Planting: An extension services program would not be complete without a tree planting component. In partnership with Saskatchewan Environment and Resource Management, the Association helped 15 landowners in the spring of 2000 to plant 21,000 trees on private lands. 30,000 trees are scheduled to be planted in the spring of 2001 by 18 landowners.

III. Results and Conclusions:

Extension Services are vital for disseminating forest management information to landowners and managers. An information resource centre coupled with extension services, such as those supplied by the Association under AFIF, is essential. Landowners require access to relevant and practical information in order that they may make sound resource management decisions. The on site consultation and field visitations have proven to be the most effective way to disseminate information to landowners. This is due to the fact that the landowner and the extension person can focus in on the management needs relative to the actual landbase and the owners needs and abilities.

IV. Further Development:

It is essential that extension services, geared towards providing woodlot management assistance, become further developed. Any growth of this potentially significant rural economic sector is dependent on such services being available. The sustainability of economic activities related to woodlot management is also dependent on these extension services being available. Until forestland owners and managers become adept at practicing suitable types of management, the provision of technical assistance will be needed. This could take decades.

The cooperation of the forest industry, governments and woodlot owners to provide such services would shorten the time needed for managers to become proficient at managing their forested property and improve the odds of this type of economic activity becoming significant to the province!

There is currently enough public interest in receiving technical planning assistance for four extension positions, including one for disseminating information from the resource centre.

V. Performance Indicators:

Results Achieved

1. Increased Economic Activity:

There are several new small-scale forest product enterprises under development. Most are focused on producing value added wood products such as pallet and decorative woods from native tree species. Many more people than before have become aware of the need for specialized equipment such as shaping and molding machines and kilns, training to operate such equipment, wood grading skills and niche market information. The extension program has disseminated information about all of the above aspects of these types of business developments. The bulk of new economic activity is centered on the sale of standing timber from woodlots to small-scale lumber millers and the large forest

product companies. Information about how to best make such sales, including the regeneration of the forests, has been requested and delivered on a regular basis.

Information about non-wood business opportunities that utilize various forest and prairie plants has also been frequently requested and supplied. Forest management assistance as an aspect of ecotourism business development has also been frequently requested and supplied.

It is difficult to qualify the extent of jobs created, as many are seasonal and part time. The number of jobs involved in this sector has also never been accurately established to be able to compare to. Until Saskatchewan's large forest product industries cooperate and begin to contribute to the development of this industry, instead of liquidating woodlot resources, the growth of this industry will remain limited and slow.

2. Increase the number of woodlots under management:

There have been 57 woodlot walk-thru assessments completed under the program. About 40 of these have included numerous follow-up consultations and information packages. About half of the total are known to be doing some of the management work suggested in the assessment summary while most of the rest have owners who are actively researching their management options before carrying out actual management work.

These woodlot assessments give landowners information about the health and productivity of their forestlands as well as options about how to best manage them within the goals of the owner. To improve the sustainability aspect of managing these woodlots, the owners are also introduced to concepts of ecosystem-based management and biodiversity conservation.

There are currently two major management plans about to be implemented, and will requires follow-up work. Three woodlot assessment applications are also on file awaiting this service. Several more applications are expected from various clients.

3. Increased public and government awareness of forestland values and communication efforts:

During this program there have been numerous presentations given at conferences and workshops organized by other organizations. Information booths have also been manned at different events where displays are shown and information given out. This includes events such as the forestry exposition, agribition, and several agroforestry, organic alternatives and ecosystem management conferences.

Various training workshops and public land use planning initiatives have also been attended where networking is done and management advice given. There is always ongoing communications with various government agencies who have related interests. Numerous media releases and interviews, magazine articles, Aginfonet web postings,

newspaper coverage, newsletter production and radio interviews have helped to keep the public and interested government departments abreast of the issues.

4. Increased interest in training:

Most of the staff time is spent introducing people to basic concepts of woodlot management and forest ecology. Whether the client's interest is primarily monetary or environmental, these basic concepts are critical to the sustainable management of the forest resources. Once understood, practicing management using these concepts requires a variety of levels of training on a broad number of topics. The verbal communication during the development of woodlot assessments and management plans are considered to be primary training tools. The 'Value Adding to Wood' conference provided training information on the various steps required to be able to produce value added wood products. Training contacts were made and opportunities were explored as to how to organize and provide larger training workshops by experts in specific aspects of value adding. The program allowed us to produce a resource binder containing a broad spectrum of technical information about adding value to wood.

Two constraints listed in the extension funding proposal included the difficulty in finding adequately trained specialized extension staff trained in this field and the lack of a resource centre with the information needed by the staff and landowners. The woodlot extension program has allowed the development of an excellent information resource base and encouraged the training of several qualified extension staff. This program has made available the necessary resources for extending such specialized services to landowners. Most of the disseminated information from the resource centre and the staff was not previously available to the public.

5. Prevent further deforestation in the boreal transition ecoregion:

This long-term objective has not yet been met and may never be unless the forestry industry begins to manage it's' timber supply sustainably. Attaining this 'buy in' by the industry is an ongoing challenge and may require more intense encouragement by the public and government to accomplish. A growing interest in habitat conservation could assist in preserving some of these lands but will not affect a change to the overall lack of management for forest fringe woodlots. While travelling the province, the staff has made several observations about ongoing deforestation including:

- Woodlots in the boreal transition ecoregion of the province are still being converted to agricultural use at a rate of 25,000 to 30,000 acres per year. Half of the remaining area in forest cover may still be converted to exclusive agricultural use if the current trend continues.
- The are still no effective incentives for the management and reforestation of forest areas on private lands.
- No significant numbers of tree seedlings have been planted on private lands since the 1960s.

- The growing demand for cheap wood by forest product companies is increasing the pressure to exploit the timber growing on remnant woodlots and on agricultural crown lands.
- The overall health of the forest ecosystems in most woodlots is continuing to deteriorate because of poor quality or no management.
- The sustainable use and management of woodlots is still in the conceptual phase. The feasibility of being able to manage woodlots sustainably *(particularly very small woodlot fragments)* has not been proven. The work done under this program will aid the development of research data on this subject over time. This data will eventually help determine the feasibility of promoting and encouraging the sustainable management of woodlots.

VI. Data Collection and Conclusions:

Information about clients and the biophysical features of their landbases are recorded as part of the extension services. The data collected could prove to be valuable to the land use planning efforts of other organizations, particularly for lands in the forest fringe area of the province. The development of recovery plans for endangered species, including local land use planning or landscape level planning, will require such detailed inventory information. Some of the most valuable data is of detailed inventories of plant species resident on each landbase as well as the quality and abundance of the most common plant species, including trees. Data about the types of wildlife habitats and the species known to inhabit each landbase is also usually included as part of each inventory. Whenever possible, the delineation of ecosite types and phases is also recorded.

Because little inventory work has ever been conducted on lands in the forest fringe, this is important data. It would contribute significantly to a more complete inventory if such work is ever done. This data should be incorporated into the existing provincial inventory database.

C. Personnel:

Through the term of the program there were 4 extension personnel hired. The most extension personnel on staff at any one point were 2.75. Most staff held degrees in forestry. Because most of their previous training dealt with industrial forestry concepts that were primarily timber oriented, staff required training to effectively understand small-scale land management concepts and how to interact with the agricultural community. Basic training about 'value-adding', particularly wood processing and specialty forest products was also given to the extension staff.

Some training was supplied to staff members through their attendance of various workshops that were hosted by SERM, Forest Ecosystems and Fish & Wildlife branches. These workshops generally focused on specific topics such as forest soils, prescribed burning and GIS applications. Most training was on the job and supplied by the head office.

One extension staff was operated out of the head office in Spiritwood and 2 were located in Saskatoon, with 1 being working at the Canadian Wildlife Service. A better situation would have been to have all personnel working out of the same office. This would have resulted in more task and idea sharing. Regular staff meetings were good for organizing work schedules, but the head office assumed ultimate responsibility for taking client calls, receiving walk-in traffic and sending out information packages. This is due to the fact the head office housed the library and other extension materials and was located in a rural area.

D. Equipment:

A used photocopier was purchased in August of 2000.
Minolta - Model EP 4233 Copier - Serial # 3173278 - Cost: $1,500.
The budget for this equipment was from the administration portion of the agreement.

E. Acknowledgements:

The agreement has been acknowledge on all materials produced, all events hosted and all events attended.

F. Project Information Materials:

Project information materials developed for distribution as brochures and 'information sheets' have been previously submitted. Copies of woodlot assessment summaries and management plans are on file at the woodlot office.

ADDENDUM

June 18, 2001

By: Bruce Lyle

FWAS Extension Report - July 2001

Extension Services

(Display overheads of logos & extension goals) – "Primary Goals of Woodlot Extension Services"

- *To supply extension services to owners & managers of wooded lands in the agricultural sector of Saskatchewan*
- *To provide assessment and management planning assistance using a sustainable approach by introducing managers to the concepts of ecosystem-based management & biodiversity conservation*
- *To disseminate forest management information to farmers, ranchers & other land managers*
- *To increase the awareness of economic opportunities presented by the management of forest resources*
- *To increase interactions between people interested in land management issues*

Introduction

The extension work that has been done to date has been beneficial to this province and about as effective as it could be for the level of resources committed to it. Unfortunately, when you consider the large-scale issues of biodiversity conservation, economic development, deforestation, climate change, species extinction, etc, the scale of extension services to date and currently occurring will have little effect on these issues.

Educating people about, and encouraging them to use sustainable and diverse land management practices has always been a major focus of the extension services we have provided. Increasing the management expertise level of land managers, and the number of people, who are so educated, has been slow because of several factors. These are primarily the level of resources that have been committed to do this educating, and the economic practicality of having woodlot management as a common and widespread land management practice.

Possibly the most important positive effects of the extension that has been done so far won't become fully realized for years. Considering the slow progress of change, the ideas seeded widely amongst people across the province by our extension services will continue to spread and influence positive change. If there is one thing that people are good at, its' passing ideas around and showing others what they have been doing. For every person actively involved in managing their woodlot now, there are ripple effects that could eventually result in dozens of others doing likewise.

Having better educated landowners will ensure the further development of a woodlot sector and the broader use of more productive and sustainable land management practices. The trend of loosing native ecosystems and economic development potential will continue until enough people: (a) recognize the various concepts of integrated land

management and sustainability, (b) see the need for such management to become more common, (c) apply pressure to the right places to make the economics work, and (d) then learn how to practice these currently uncommon management practices. Enough people means woodlot owners, governments and industry.

Economics of Woodlot Management

One interest commonly being expressed amongst woodlot owners is the economic viability of managing their woodlots. This aspect of owning a woodlot is still unprofitable for most people. Many woodlot owners envision being timber commodity producers, which is in keeping with their agricultural experience, but without the woodlot owner adding value to what they produce, only the sale of softwoods currently hold any promise of providing equitable returns. Because the softwoods are all but gone now from private lands, most woodlot owners have little or no ability to generate income from the sale of raw unprocessed poplar timber. Until the large forest product companies in the province get involved in the management of all of their resource base, and not just their license areas, this situation is unlikely to change appreciably.

Most woodlot owners, or at least among FWAS's membership, the highest proportion of them express a stronger interest in the other values of woodlots than any they can see from selling raw timber. This attitude is probably partly due to the continued lack of recognition of the value of their timber by industry, governments and the general public. It is also partly because they have a strong environmental and conservation ethic and see better than most people the ever increasing value of their woodlots as forestland continues to disappear across their landscape. For people to get economic benefits from some of these many of other values is another challenge they could use assistance with. Many woodlot owners perceive that their habitat management, production of various specialty forest products, tourism and ecotourism ventures, etc, to hold as much or more economic promise than that of being an industrial timber producer.

This current poor economic situation surrounding the management of woodlots has led me to concentrate most of my promotional time for business development largely to the value-adding aspect, relative to making money from specialty lumber. Though some people are doing this to varying degrees, most woodlot owners are not in a position to start such ventures, particularly without assistance. The production of specialty lumber, particularly aspen lumber, should become a small but economically significant component of a yet undeveloped woodlot economy.

Ecologically Sustainable Management?

Excluding the poplar bluffs of the aspen parkland, there are questions and doubts about whether small fragmented pieces of real forest can be managed sustainably, even if it were economical to manage them. I have little doubt that woodlots still attached to larger contiguous pieces of forest can be managed sustainably, meaning *(no loss of biodiversity, ecological integrity or productivity of the land),* but small, increasingly

isolated fragments are very different. Under the definition of sustainability as just given, the sustainability of the forest ecology in such fragments is unlikely. This refers to forest ecology, as it is currently understood. I can only hope that what '**new, never before seen**' ecology that develops in these '**unnatural areas** ' will be able function without the land loosing too much of its' productivity. For small isolated forest fragments, the loss of resident native species, invading non-native species and a changing climate may be indications that maintaining the resident forest ecology may be increasingly difficult or even impossible, regardless of how its managed.

I think that a major landscape-level management incentive program designed to reconnect fragments of forest, particularly along drainage channels, could help prevent some of the environmental damage occurring to these remnant pieces of forest.

Management Planning Projects & Woodlot Assessments

There is a fuzzy line between what could be called a management plan and an assessment with management suggestions. If an owner knows what their management goals are prior to an assessment, and both the owner and extension person are aware that the some of the suggested management options will be implemented, then their assessment would be more properly termed a management plan. Sometimes this may only mean the eradication of caragana or planting a few trees. Of the assessment summaries done, about one third should be considered to be management plans.

Between July 1997, when the extension program began, and now, there have been 61 Walk-Thru Assessment Summaries completed. Three other woodlot evaluations have been requested and hopefully there will be time to do them before our program ends.

There are several themes common to most of the woodlot assessments that have been done. They indicate the importance of conservation to our members as well as the deteriorated health of probably the majority of woodlots in the province. Only about 10% of the woodlots assessed could be described as healthy and not immediately threatened. All of the rest range from being in fair to very poor condition. Major input costs of time and or money are needed to rehabilitate most of them.

The three most important factors affecting the poor condition of most woodlots are overgrazing, age related mortality and invasive species. The most important invasive weed is caragana, followed by a few species of grass. If management to control or eliminate these species isn't done in a timely fashion, they could eventually cause a severe loss of biodiversity and the collapse of ecological integrity, which results in a loss of productivity and the eventual loss of the forest.

The condition of widespread age related mortality, also known as *stand breakup,* is primarily a result of disrupted natural regenerative disturbances, coupled with the lack of a management regime that would have similar effects as the natural one.

Overgrazing and the destructive forest pasture improvement practices many ranchers use causes extensive and intensive long-lasting damage to a large area of the forest fringe. I won't get into this subject too much other than to say that this situation could be improved through education and management planning assistance to ranchers. If industrial aspen demand and prices were to become equitable and predictable, this would act as an enticement to ranchers, who use forest pastures, to improve their grazing management to limit the amount of damage done.

Six management plans focussing on timber have been completed to date. *(Copies are on display).* This isn't counting woodlot assessments. These plans, with the exception of one done for the Saskatchewan Wildlife Federation and one privately owned quarter section, are for various provincial government departments, including their respective local planning committees. Two completed plans were done for the Fish & Wildlife Branch of SERM and one was done for Pastures Branch of Sask Ag & Food. One of the wildlife Branch plans *(near Spiritwood)* is well along in its' implementation. The other didn't call for any immediate management. The plan for the Wildlife Federation was implemented last year. It is unclear if the plan done for the Wingard Community Pasture will be implemented any time soon.

All of the plans that have been done translate to about 2,729 hectares (6,740 ac.) of forestland being managed. Most of this forestland has never been managed before.

These jobs are just the tip of the iceberg. Several have already been turned down for various reasons. If we had more resources, I have no doubt that many more jobs would be offered to us. We think that this is mostly because of the affordability and the high quality of the work we do. I have little doubt that Fish & Wildlife and Forestry Branches of SERM, Lands and Pastures Branches of SAF, some reserve lands and several conservation groups would use us more if we had the resources to help them.

Other Extension Work – Information Packages / Tree Planting

Information packages are regularly sent out to people inquiring about our Association and our services, as well as other types of information. The theme of most of the packages sent out is based on the information being requested. Most of it is related to various aspects of the management of specific owner's woodlots, marketing timber and lumber processing. Requests for information about forest health issues, *(ecology, successional processes, insects, diseases, etc.)* are also quite common. Between the beginning of the project and now, there have been 187 of these packages sent out through the mail. A few dozen more were given to walk-ins off the street and several hundred other less specific packages were distributed at various events and through e-mail. About 30% of packages are requests specifically for information about our association and services.

This year's spring treeplanting by woodlot owners was very successful. Martha O'Sulivan of SERM organized the acquisition of the seedlings through SERM and the PRT nursery. We both organized the sorting and distribution of the seedlings to woodlot

ners. A total of 30,000 seedlings were planted, including 21,300 white spruce, 120 black spruce and 8,580 jack pine. They were distributed to 16 landowners across the southern fringe of the forest. There were only two more owners planting than last year, though not all of these landowners were the same people as last year. Delivery and pick-up of the seedlings went smoothly though a few people had problems finding help to do the planting. If higher numbers of seedlings are planted in future years, it will be important that there is help for people with this problem.

We feel this is our most successful treeplanting effort to date and hope that in the future much higher numbers of seedlings will be planted. We also feel that aspen seedlings should be grown here and be made available to woodlot owners just as the softwood seedlings are. I feel confident that the numbers being planted by landowners could be increased to more than a quarter million a year if enough energy was put into an effective planting program.

Media Exposure / Events / Networking

We haven't done a lot of publicity about our services since loosing most of our extension staff. We have tried to gear our media exposure to our ability to deliver these services. This is to prevent me from getting more work than can be done with the resources we have left. *(I recently evaluated a woodlot for a person who picked up our information at the forestry exposition last year!)*

Publicity for the association has been through several media formats. Newspapers and the radio have been the main ones we have used with public announcements of events we have been involved with such as the forestry exposition in P.A. in August. Several articles were also prepared and have appeared in various government publications such as SAF's Farm & Food Report, Sask Tourism as well as the Prince Albert Herald.

Opportunities for getting more articles published in other magazines and other organization's newsletters are plentiful. Making the time to do this is a challenge. Getting exposure through many of these provincial publications does not require us to pay a fee. *Examples of other magazines and newsletters include: The Blue Jay (Nature SK.), NPSS, DEDA, Synergy, etc.*

In May, I gave presentations at a water quality seminar held in Spiritwood by the Sask Eco Network. It was one of several such seminars held across the province. I will be manning the FWAS booths at the Forestry Exposition being held in P. A. in August and for a day at the Eco Village at the Ness Creek Folk Festival in July.

Conclusions:

How our extension services have been given to date has been effective and as economical as possible, however, adding an element to it in the form of increased client field visits is becoming more important as management activity and business interests and developments increase.

The FWAS extension staff has done detailed planning and given management advice *(Woodlot plans & assessments)* for an area of forestland and wooded parkland equaling 6,661 hectares or 16,460 acres. The most significant factor to read into these figures relates to the amount of management work developing for a percentage of these lands. Perhaps as much as 40-50% of this total area will begin to be managed on a regular basis. When you consider who the managers of these lands are, and the difficulties they face in implementing their plans, it becomes obvious that further aid to them is critical to the success of their management. Their lack of knowledge, undeveloped confidence in practicing unfamiliar types of management, their experience and time, and low economic returns are all factors that will hinder informed decision making and contribute to mistakes being made.

There are three primary issues hindering the development of a viable woodlot sector in this province. These are:

1. Not having long term extension services in place to help educate land managers.
2. There are no incentives to make sure that reforestation occurs on private lands where timber harvesting has taken place.
3. The amount purchased and the prices paid by large forest product companies for wood from private land doesn't cover the cost of production

It is very important that woodlot management become economically viable while there are still woodlots to manage. Even though the clearing of land has slowed in recent years, other uses occurring on these lands rarely pays attention to the health of the resident ecology and usually contribute to their degradation and eventual loss.